NASA-CR-198850

NAL TECHNICAL REPORT

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Grant Number:

Principal Investigator:

NAGW-2907 Dr. Abhijit Saha

Institution:

Project Title:

STScI

Search of Cepheids in Nearby Dwarf Galaxies

Reporting Period:

1/01/92 to 6/30/94

The objective of the project was to detect and measure Cepheids in nearby dwarf galaxies to get good distances to them, so that these galaxies in turn can be used as test particles to investigate the dynamics of the Local Group.

The data collection has been completed for ten galaxies.

Analysis of several of these galaxies has been completed and the results published:

- 1) "Variable Stars in the Pegasus Dwarf Galaxy (DDO 216)", J.G. Hoessel, M.J. Abbott, A. Saha, A.E. Mossman and G.E. Danielson, 1990, A.J., 100, 1151.
- 2) "Variable Stars in the Leo A Dwarf Galaxy (DDO 69)", E. Tolstoy, A. Saha, J. Krist, 1994, AJ, 108, 645.
- 3) "Variable Stars in Dwarf Galaxy GR8 (DDO 155)", E. Tolstoy, A. Saha, J.G. Hoessel, & G.E. Danielson, 1995 (AJ, in press).

Leo A and GR 8 are known from their velocities to be located near the so called "zerovelocity surface" of the Local Group. We know from these measurements that this surface is at a distance modulus of about 26.0, indicating a relatively loosely bound Local Group. The completion of the program will put more stringent constraints on the mass and extent of the Local Group.

Work has also been completed on IC 10, and a paper is in preparation.

Work on NGC 2366 is in an advanced state of analysis.

A PhD thesis by Eline Tolstoy, to be completed by the end of 1995, will include an analysis of the star formation history in Leo A, GR 8 and NGC 2366.

(NASA-CR-198850) SEARCH OF CEPHEIDS IN NEARBY DWARF GALAXIES Final Technical Report, 1 Jan. 1992 - 30 Jun. 1994 (Space Telescope Science Inst.) 4 p

N95-71382

Unclas

See instructions on the back. If report is for mare than one grain or assistance agreement, attach completed Standard Form 272-A. Significant of the sta	Federal sponsoring agency and organizational element of which this report is submitted.		
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FINAL 272 REPORT - NAGW-2907			
15. Certification			
I certify to the best of my SIGNATURE DATE REPORT SUBMI	RT SUBMITTED		
knowledge and belief that AUTHORIZED	1 7C		
this report is true in all respects CERTIFYING War Thul			
and that all disbursements have OFFICIAL TYPED OR PRINTED NAME AND TITLE			
been made for the purpose and SUSAN K. PHILBIN ACCOUNTANT (410) 338,4407			
conditions of the grant or agreement. TELEPHONE (410) 338-4407 THIS SPACE FOR AGENCY USE			

Approved by Office of Management and Budget, No. 80-R0182

FEDERAL CASH TRANSACTION REPORT CONTINUATION (This form is completed and attached to Standard Form 272 only when		Approved by Office of Management and Budget, No. 80-R0182 1. Federal sponsoring agency and organizational element of which this report is submitted.	
		•	12 Only when
reporting more than one grant or assistance agreement.) 2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272) SPACE TELESCOPE SCIENCE INSTITUTE		•	
		WASHINGTON, DC 2054 3. PERIOD COVERED BY THIS REPORT	
		FROM (month, day, year)	TO (month, day, year)
		01/01/92	06/30/95
4. List information below for each grant or other agreement			DIEDIDEELIENTE
FEDERAL GRANT OR OTHER	RECIPIENT ACCOUNT NUMBER OR OTHER	NET DISBURSEMENTS (Gross	CUMULATIVE
IDENTIFICATION NUMBER (Show a subdivision by other identifying numbers if	IDENTIFYING NUMBER	disbursements less program income	NET DISBURSEMENTS
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required by the Federal Sponsoring Agency)		PERIOD	
(a)	<i>(b)</i>	(c)	(d)
NAGW-2907	G002.69500	0.00	66,000.00
5. TOTALS (Should correspond with amounts shown on S	F 272 as follows: column (c) the	\$0.00	\$66,000.00
same as line 11h; column (d) the sum of lines 11h and 11i	of this SF 272 and cumulative		
disbursements shown on last report. Attach explanation 272-201	on of any differences.)		STANDARD FORM : " " " "

Space Telescope Science Institute Property 1018 Receive Report by Contract-Grant number as of 11/04/94

Current Custodian	SPENCER, DARLENE	
Condition Code	A4	
Trans Code	œ	
Unit cost	2,882.00	\$2,882.00
Comments	Original Acquisition	IOTAL
Date	06/17/92	Ē
Location	S406	
Model Number	ST41650N	
Description	DISK DRIVE, WREN	
t Tag No.	GR000234	
Contract/Grant	NAGW-2907 GR000234	

PATENT/INVENTION REPORT

Principal Investigator: Dr. Abhijit Saha

Grant: NAGW-2907

Patents/Inventions Developed: NONE